Haier SERVICE MANUAL

Order No. Ref0903S021V0

Chest Freezer

MODEL:BD-429GAA

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It dose not contain warnings and cautions to advice non-technical individuals of potential dangers in attempting to service a product. Product powered by electricity should by serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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Haier Group

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Chapter 1 General Information

1-1. General Guidelines

When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

1) Leakage Current Cold Check
2) Leakage Current Hot Check
3) Prevention of Electro Static Discharge (ESD) to Electrostatic Sensitive

1-2. Insurance Test

1. Check if there is any leak of current.
2. Cut out the power supply before the repair to avoid an electrical shock hazard.
3. In the case of a live-line test, insulating gloves should be worn to avoid potential electrical shock.
4. Confirm the rated current, voltage and capacity before testing with any kinds of instruments.
5. Watch if the upper door is open when you check something at a lower position.
6. Take out every part in the cabinet before moving the machine, especially things like panels (e.g. glass shelf).
7. Please wear intact cotton gloves when repair any parts of the evaporator, so that scratches by the sharp fins can be avoided.
8. If there is a breakdown with the refrigeration system, please surrender the machine to the service center, else the leaked refrigerant may pollute the atmosphere.
9. The refrigerator use AC of 220V with a frequency of 60Hz.
10. A big fluctuation of voltage (exceed the range 187～242V) may cause a start failure of the refrigerator, a burn-out of the control panel and compressor, or an abnormal sound from the compressor in operation.
11. Take care not to damage the supply line. Don’t yank at the line; pull the plug out gently from the receptacle. Don’t press the line under the cabinet or step on it. Take care not to roll on or damage the supply line when moves the machine from the wall.

12. In the case of leakage of inflammable gases like carbon monoxide, open the door and windows. Don't pull out or insert the plugs of the appliance.

13. Don't touch the refrigeration surface of the freezing compartment when the refrigerator is in operation, especially when your hand is wet, else you may be glued to the surface.

14. Pull out the plug of power supply during clearance or power outage. Wait at least five minutes to resume the power supply in order to prevent damage to the compressor caused by continuous restart.

1-2-2. Photo used in this manual

The illustration and photos used in this Manual may not base on the final design of products, which may differ from your products in some way.

1-3. How to read this Service Manual

1-3-1. Using Icons

The meaning of each icon is described in the table below:

Note:

A "note" provides information that is not indispensable, but may nevertheless be valuable to the reader, such as tips and tricks.

Caution:

A "caution" is used when there is danger, through incorrect manipulation, may damage equipment, loose data, get an unexpected result or has to restart (part of) a procedure.

Warning:

A "warning" is used when there is danger of personal injury.

Reference:

A "reference" guides to other places in this binder or in this manual.

2-1. SPECIFICATIONS

Superfast freeze function.
Adjustable temperature control with power indicator.
High pressure and microbiological foam filled door for energy conservation.
Convenient water drain.
Hi-temp indicator.
External controls.

1.	**Type Model**		BD-429GAA
	Commercial brand		Haier
	Product description		Chest Freezer
	Type of appliance (FS=free standing / BI= built-in)		FS
	Energy efficiency class		A+
	Climate class (N=16-32℃ ST=16-38℃ T=18-43℃)		SN~T
	Freezer star rating		*/***
2.	**Key features**		
	Gross capacity	l	435
	Total net capacity	l	429
	Freezing capacity（kg/24h）	kg/24h	28
	Energy consumption/year	kWh/year	333
	Max storage time at breakdown	h	35
	Defrosting (Manual-Automatic)		Manual
	Kind of coolant *(R134a/R600a)*		R600a
	Foaming components *(R141b/C-P)*		C-P
3.	**Technical data**		
	Voltage / frequency	V/Hz	220-240~/50
	Input power / currency	W /A	200/2.0
	Length of cable / incl. plug	cm	150/155
	Temperature range (from>to)	°C	≤-18
	Energy consumption / year	kWh/year	333
	Energy consumption (EN153) per 24 h	kWh/24 h	0.91
	Cooling system: (K=Compressor / A=Absorption)		K
	Maximum noise level	dB(A)	52
4.	**Aesthetics**		
	Door		Streamline
	Chest		Streamline edges
	Colours:		
	Cabinet		white
	Top		white
	Door glass		-
	Door frame		white

	Fascia panel / Handle (w/b/g/s)		white/white
5.	Equipment & accessories		
	Product classification (Super eco/Eco/Standard)		Standard
	Lid (Number/Handle/Lock)		1/●/●
	Type of lid (Hinge/Counter balanced/Sliding)		Hinge
	Inside walls (Stainless steel/Aluminum/Synthetic mat.)		Anodized Aluminum
	Insulation Lid thickness	cm	7.8
	Walls thickness	cm	7
	Baskets number	n°	2(metal)
	Defrost drain		●
	Interior light		●
	Adjustable thermostat		●
	Fast freeze lamp (yellow)		●
	On light (green)		●
	Breakdown light (red)		●
	Fast freeze switch		●
6.	Product net dimensions		
	Unit dimensions *(H / W / D)*	cm	85.5/141/74.5
	Net weight	kg	67
7.	Packing dimensions & load ability		
	Packing dimensions *(H / W / D)*	cm	89.5/147/77.5
	Gross weight	kg	76
	40 ' High cube container load	pcs	71
8.	Service		
	User instruction *(languages)*		GB(Optional)

2-2. External views

Chapter 3 Installation, adjustments and maintenance

3-1. Installation

The freezer should be conveniently located for day-to-day use in a dry well-ventilated room.

Do not install the freezer where the temperature will go below 0°F or above 110°F, because it will not maintain proper temperatures.

Be sure to install the freezer on a floor strong enough to support it when it is fully loaded.

The freezer must be solidly positioned on the floor if it is to function at its best. Shims may be used to accomplish this wherever the floor is too uneven. If the place selected for the freezer is damp or moist, place 2 X 4 s (51 mm X 102 mm) under its entire length to assure adequate support.

3-2 Defrosting and Draining

In most climates, defrosting will be necessary only about twice a year.

To have the freezer operate most efficiently, do not permit more than 1/2” (13 mm) of frost to accumulate on the shelves.

To remove frost, scrape with a plastic or wood spatula or scraper.

Do not use an ice pick or sharp-edged instrument as it may damage or scratch the freezer.

Do not use any electrical device in defrosting your freezer.

For Complete Defrosting

1. Turn the temperature control to the *OFF* position and unplug the freezer.

2. Remove all food and place it in corrugated boxes, insulated bags, picnic coolers, etc. Use towels and newspapers for insulation as needed.

3. With the door/lid open, use pans of hot water to speed loosening of frost. Remove large pieces before they melt.

Chest models have a defrost water drain at the front.

4. Sponge excess water from the bottom of the freezer as it collects to prevent over flowing.

5. After defrosting, clean the inside of the freezer.

6. Replace the drain plug inside the cabinet and the cap on the defrost drain. Fold over and dry the gasket on the hinge side of the lid.

7. Plug in the freezer. Return the temperature control to its previous position and return food to the

freezer.

Water may drip from the back flange of the lid cover during defrosting. This is normal. Ice builds up in the lid insulation when the lid is open for adding or removing food, and melts during the defrosting operation.

3-3 Cleaning the Freezer

Outside. Protect the paint finish. The finish on the outside of the freezer is a high quality baked-on paint finish. With proper care, it will stay new-looking and rust-free for years. Apply a coat of appliance polish wax when the freezer is new and then at least twice a year. Appliance polish wax also works well to remove tape residue from freezer surfaces.

Keep the finish clean. Wipe with a clean cloth lightly dampened with appliance polish wax or mild liquid dishwashing detergent. Dry and polish with a clean, soft cloth. Do not wipe the freezer with a soiled dishwashing cloth or wet towel. Do not use scouring pads, powdered cleaners, bleach, or cleaners containing bleach.

Inside. Clean the inside of your freezer at least once a year. We recommend that the freezer be unplugged before cleaning. If this is not practical, wring excess moisture out of sponge or cloth when cleaning in the vicinity of switches, lights or controls.

Use warm water and baking soda solution-about a tablespoon of baking soda to a quart of water. Rinse thoroughly with water and wipe dry. Do not use cleaning powders or other abrasive cleaners.

An open box of baking soda in the freezer will absorb stale freezer odors. Change the box ever y three months.

Care should be taken in moving the freezer away from the wall. All types of floor coverings can be damaged particularly cushioned coverings and those with embossed surfaces.

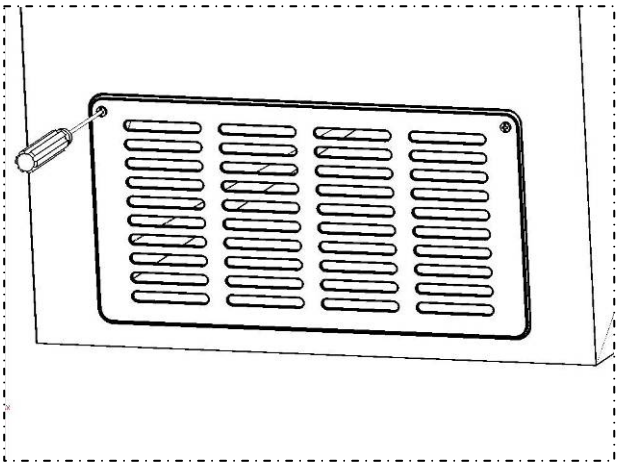
Chapter 4 Disassembly

4-1. Door assembly (Door, hinge, hinge cover)

Disassemble the hinge assembly and the hinge cover: the hinge cover, take away the cover, then screw off the eight screws on the bottom hinge, so the whole hinge could be moved.

4.2. Compartment Grill assembly

Unscrew the two screw of grill, we can take away the grill.



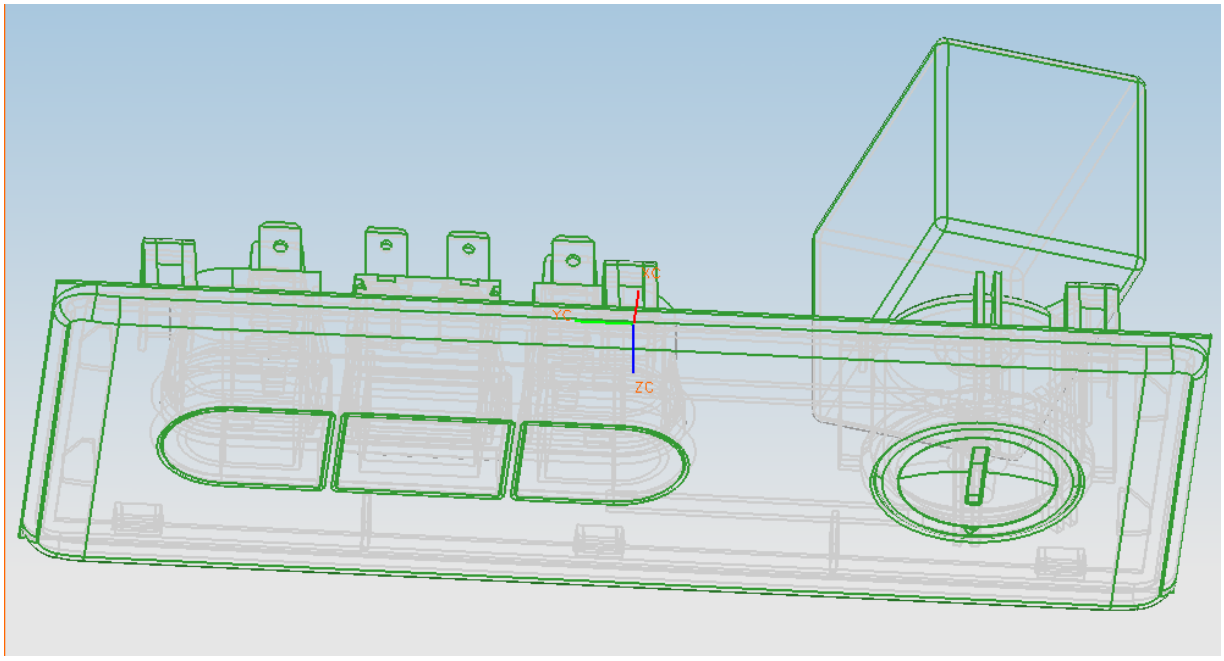
4-3. Control panel assembly (Panel, cover board, knob, indicator light)

Unscrew the compartment grill (refer 4-2), push the panel claw gently you're your finger or tools, at the same time pull panel outside then take away it.

Take away the knob with a sharp-edged tool.

Press the cover board and take away it.

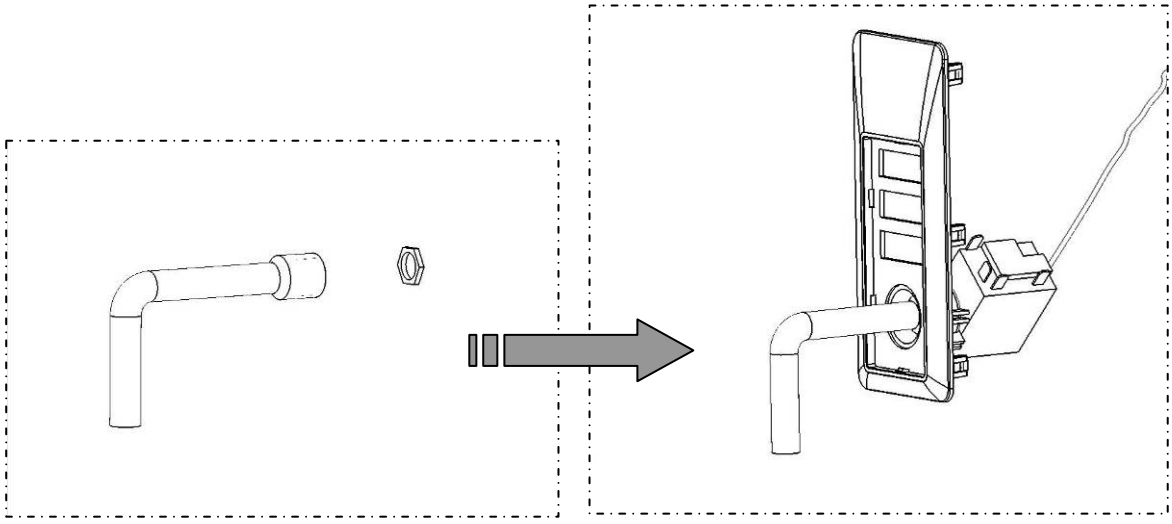
Press two claws on indicator light side and push it from back to front.



4-4. Thermostat assembly

First take off the knob (refer 4-3), Use turnbuckle spanner or acutilingual plier, unscrew the turnbuckle, then thermostat can be moved from back of panel.

Note: When assembly thermostat you should placed thermostat in originally direction.



Chapter 5 Control and display system

5-1. Control panel

Freezing temperature selection is made by setting the control from ***min*** to ***max*** (coldest).

If you want colder or warmer temperatures, adjust the control one step at a time.

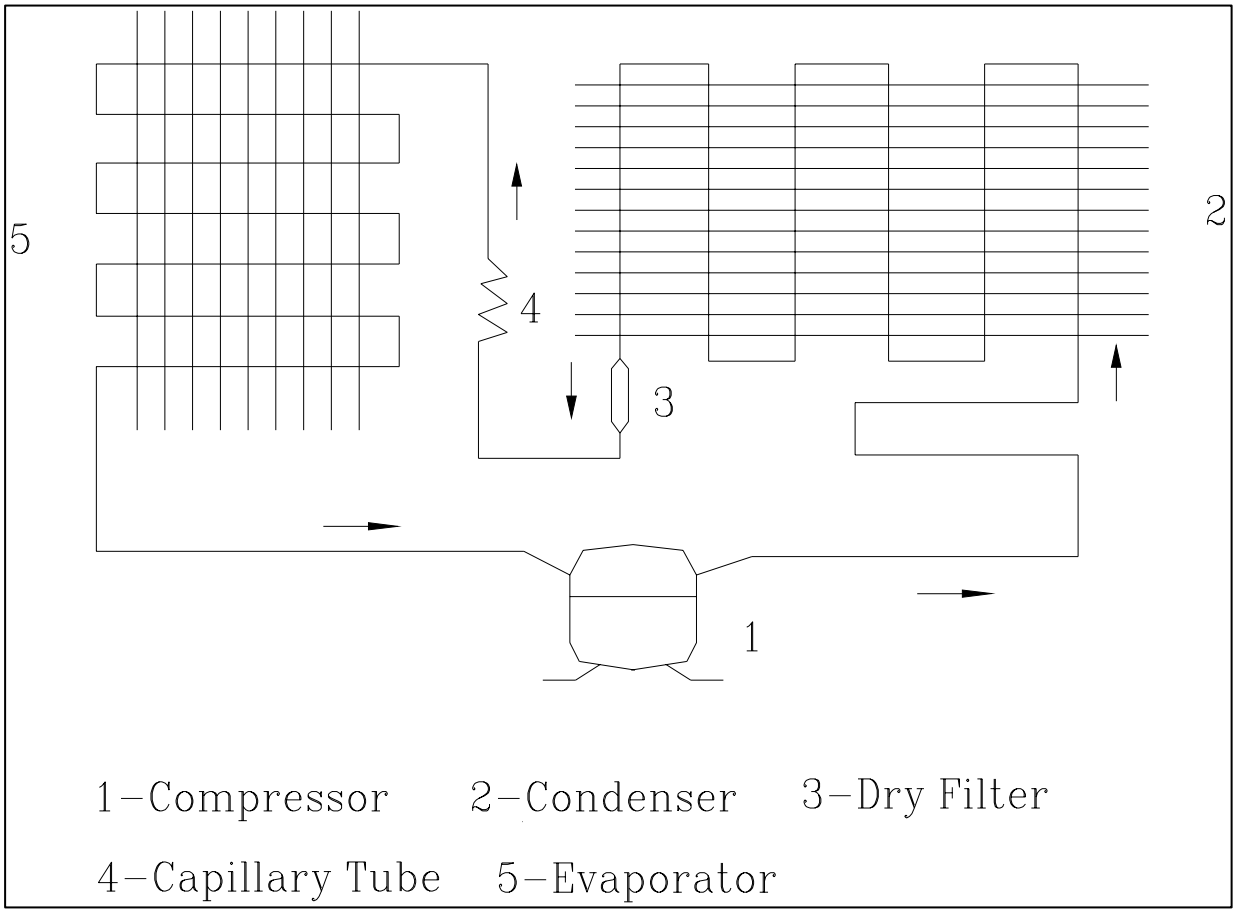
Allow several hours after each one-step adjustment for the freezer temperature to stabilize.

5-2. Starting the Freezer

1. Clean the inside of the freezer with a mild solution of baking soda and water
2. Connect cord to power outlet.
3. Make sure the temperature control is set at 4.
4. Allow freezer to operate for at least four hours before placing food inside.

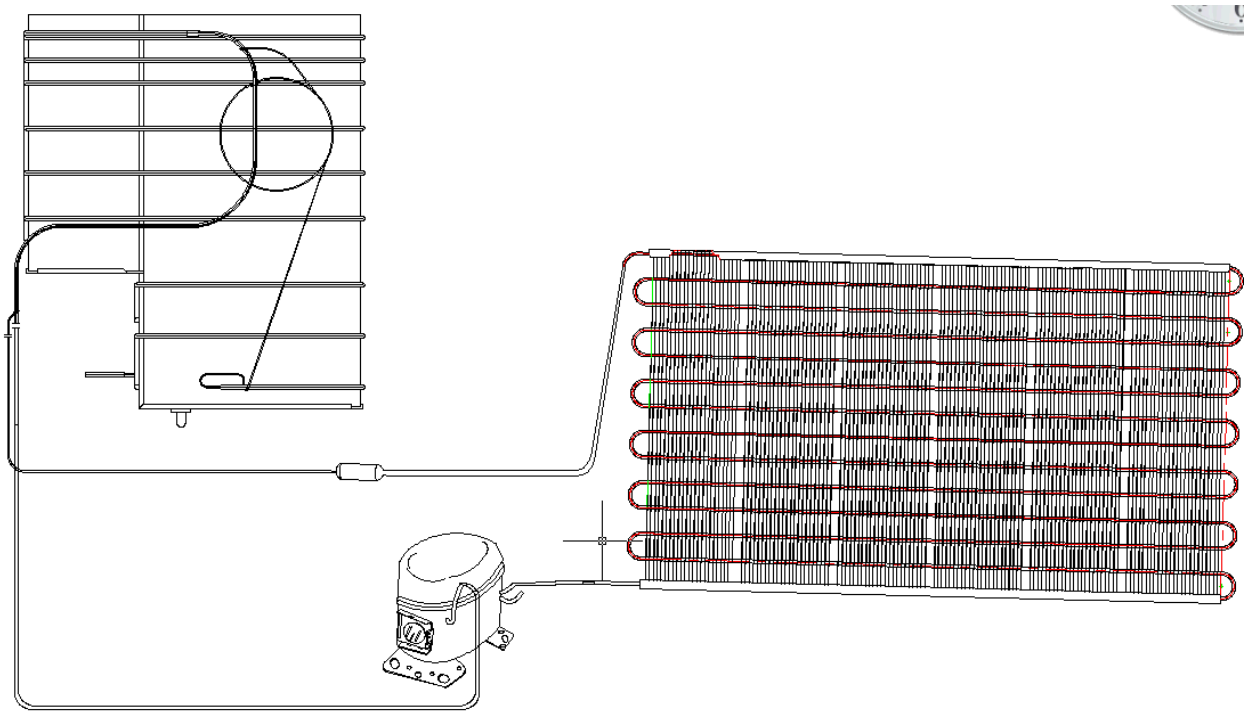
Chapter 6 System flow principle

6-1. Refrigeration flow chart



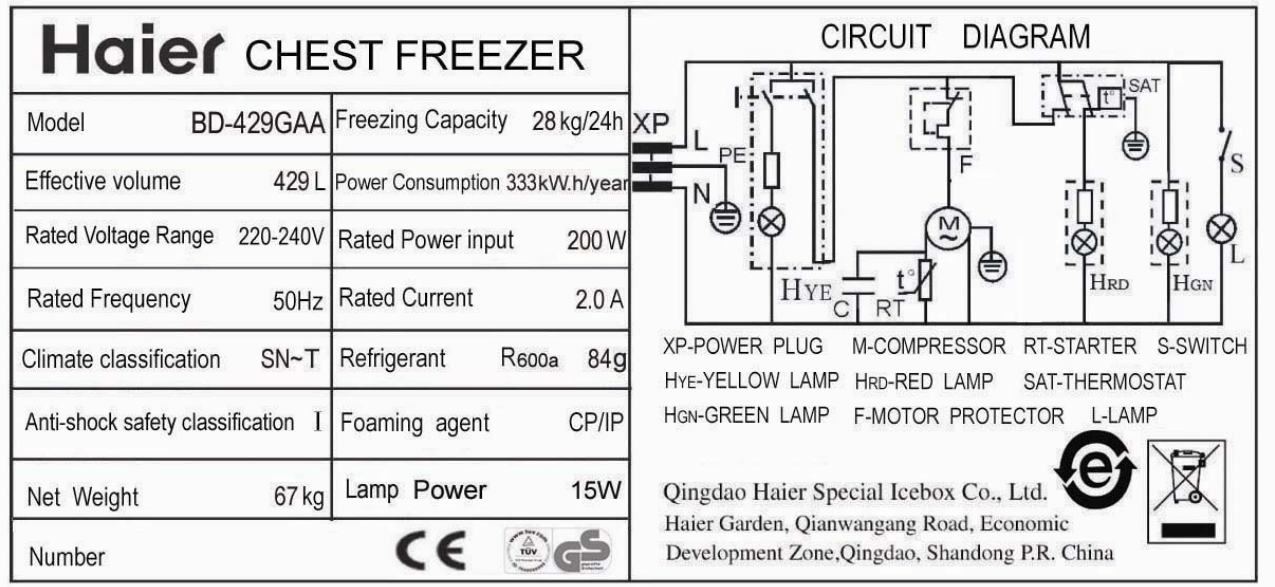
The refrigeration system of direct cooling single-system cooler belongs to the category of a single-temperature and single-control refrigerating system with one evaporators and is controlled by a single temperature control.

6-2. Refrigeration flow scenograph



Chapter 7 Circuit diagram

7-1. Brief principle diagram



Chapter 8 Trouble shooting

8-1. Normal phenomena

Problem	*Possible Causes*	*What To Do*
Freezer does not operate or Power-On Light is not on	Temperature control in *OFF* or *Min* or *0* position.	Move the control to a temperature setting.
	Freezer is unplugged.	Push the plug completely into the outlet.
	The fuse is blown/circuit breaker is tripped.	Replace fuse or reset the breaker
Freezer starts/stops too frequently	Door/lid left open.	Check to see if package is holding door/lid open.
	Too frequent or too long to door/lid openings.	
	Temperature control set too cold.	See About the operation of your freezer
Freezer operates too long	Door/lid left open.	Check to see if package is holding door/lid open.
	Too frequent or too long door/lid openings.	
	Temperature control set too cold.	See About the operation of your freezer
	Inadequate air circulation space around cabinet.	See Preparing to install the freezer
	Fast Freeze switch is in the *ON* position (on some models)	See About the operation of your freezer
Noisy operation or cabinet vibrates	Floor may be weak, causing freezer to vibrate when compressor is on.	Placing 2 X 4s (51 mm X 102 mm) under the length of the freezer will help support it and may reduce vibration.
	Cabinet is not positioned solidly on floor	See Preparing to install the freezer Or use shims for uneven floor
Freezer temperature too warm	Door/lid left open.	Check to see if package is holding door/lid open.
	Too frequent or too long door/lid openings.	
Foods defrosting	Temperature control *OFF* or *Min* or *0* positions.	Move the control to a temperature setting.
	Freezer is unplugged.	Push the plug completely into the outlet.
	The fuse is blown/circuit breaker is tripped.	Replace fuse or reset the breaker

	Door/lid left open.	Check to see if package is holding door/lid open.
	Too frequent or too long door/lid openings.	
Freezer temperature too cold	Temperature control set too cold.	See About the operation of your freezer
	Fast Freeze switch is in the ON position or has run for too long (on some models)	About the operation of your freezer
Moisture forms on outside of cabinet	Not unusual during periods of high humidity	Wipe surface
Interior light does not work (on some models)	No power at outlet.	Replace fuse or reset the breaker
	Freezer is unplugged.	Push the plug completely into the outlet.
	Light bulb burned out.	Replace bulb.
Door/lid wont fully close by itself	Package holding door/lid open.	
Slow starting time after being off	Built-in overload product.	
Excessive frost build-up	Door/lid left open.	Check to see if package is holding door/lid open.
	Too frequent or too long door/lid openings.	
	Not unusual during periods of high humidity	

8-2. Abnormal phenomena

8-2-1 Reasons of electricity leakage of cabinet

1. Leakage of compressor: mainly because of serious vibration, the motor coil of compressor contacts with the shell, the coat of enameled wire will come off somewhere and connect with shell. Other reasons may be over voltage, insufficient of voltage, adverse circumstances (temperature too high, ventilation and heat radiation too bad) for cabinet, thermal protection unit out of order, etc. They will make the motor coil over temperature, insulation material loose, insulation is damaged then electricity will occur.
2. Leakage of motor connection terminals: the connection terminals of fully enclosed compressor are made from high temperature soda glass sintered ceramics, around the terminals are filled with a high polymer. The terminals and insulation material must have the same linear expansion coefficient, for requirement between terminals and the shell is more than 0.5 million ohm. The reason of terminal leakage is that soda glass is broken or there are conductive materials such as water, dirt, etc., adhered to terminals.

If electricity leakage occurs outside the compressor, please use tetra chloromethane or alcohol to clean it. If the leakage occurs in the inner of compressor, it needs to be changed.

3. Leakage of temperature controller: Because of too long a period of service or too high temperature, or too much dirt, or too high humidity, there may be electricity leakage. If it has been defined that there is leakage of temperature controller, please change it.
4. Breakage of wire insulation can result in leakage of electricity. Wirings can be easily damaged under such hard environments as insulations, humidity, acid or being compressed, and may also result in electricity leakage.

8-2-2 Troubleshooting by observation

1. In normal conditions, the fan motor inside cabinet will run all the time. The fan in the compressor room will work along with the compressor.
2. Check the system tubing and make sure there is no leakage, especially at the joint connections. Refrigerant has good permeability, and it also contains a little refrigerant oil. If there is leak, there will be traces of oil at the leak points.
3. In normal conditions, the interior lamps work along with the doorframe lamps.

8-2-3 Troubleshooting by sounds

1. When the cabinet is working normally, high-pressure liquid refrigerant flowing into the low-pressure evaporator via capillary tube, gas flowing sound and water flowing sound can be heard. Open the cabinet door and access to the evaporator, you can hear the sound. If there is no sound or there is sound a little now and then, there must be leakage of system refrigerant or insufficient charge.
2. After switching on power, listen to the running sound of the compressor. If there is heavy buzz that means the motor has not been started normally. If there is bump sound, this means that the suspended spring in the compressor is broken and the compressor is running in tilt. When these matters occur, please change compressor.
3. Any abnormal noises arising when the compressor works, please check if there is any object touching the fan blade, or whether the fan blade touching wirings or tubing.

8-2-4 Troubleshooting by touch

1. Touch the cover of condenser, after continuous operation, the upper part of the cover is the warmest; the temperature of lower part is similar to room temperature. Its temperature is relative to environment temperature. The temperature in winter is low and the condenser's temperature is low too, and only a small part is warm. In summer, the temperature is high and the temperature of condenser cover is high too, and the whole condenser is warm.
2. The temperature of high-pressure exhaust pipe is high, when touching with your hand, in summer it is hot; in winter it is also hot. The temperature of low-pressure gas inlet pipe is low. In summer there is due at the pipe wall and it will feel cool when touched; In winter, it will feel cooler.
3. At normal operation, the temperature of filter dryer is similar to room temperature, only a little warmer. If the temperature is much higher or lower than that of environment, there must be problem with the refrigeration system.

Touching the above mentioned parts, if there is big temperature difference compared with normal, there must be problem and further decision should be made.

8-2-5 System noise repair

Normally there are two kinds of cabinet noise, one is the natural noise of compressor, and the other is the resonance noise or structural noise. The natural noise of compressor is controlled within a standard range, if the range is exceeded, the compressor needs to be repaired or changed. The resonance or structural noise can be handled as follows:

1. If the cabinet is not level, or if the floor is loose, please adjust the base support or fasten the cabinet to the floor.
2. If noise is caused by loose of screw between the base cover and cabinet body, please make it tight.
3. If the reason of noise is the aging rubber cushion of compressor or a loose fastening clip, please change rubber cushion, or secure clip.
4. If tubing bumps against cabinet body, or against each other, make adjustments to eliminate noise.

8-2-6 Poor cooling effect analysis and solutions

1. Check the position of temperature control dial, if it is set at “weak” position, please change it to “middle” or close to strong position.
2. Check the rear side and the top of cabinet, if it is too close to the wall or not; if the cabinet is under sunlight directly or if it is near thermal source or not; if the room temperature is too high or not; if the condenser is blocked by cloth pieces or paper or dirt or not. Any one of these matters will affect heat radiation of condenser and refrigeration ability will be reduced.
3. Check if there is too much drink stored in the cabinet。Too full of drink is not good for cold air circulation.
4. Check if the cabinet door has been closed well. If the door seal bar is too dirty and the door cannot be sealed well, remove dirt and put on a little talcum powder.
5. Frequent opening and extended opening of cabinet door will reduce refrigeration ability.

8-2-7 How to handle the seal bar for poor sealing

If there is too much dirt and the sealing effect is not well, please take a rag a, dip in warm water and clean the seal bar. After cleaning, put on a little talcum powder. If there is still seam, you can heat it by an electrical blower. Keep the temperature at 50-60℃, press the bar around by hand to make it recover.

8-2-8 How to know there is problem with compressor motor

It is easy to find out motor problem by checking the resistance of coil. The method is to connect the terminals of “common” and “run” using ohm-meter, the coil resistance can then be determined. Using terminals “common” and “start” can measure the resistance of starting coil. If the value is infinite, the coil must be open. If the resistance is much less than the value the motor has, there must be short

circuit problem inside the motor or the windings are burned.

8-2-9 Problem analysis and service

Problems	Reasons	Removing methods
Compressor cannot be started	1. Fuse is broken. 2. The contact of plug, socket, and cable is not good. Cable broken. 3. The voltage is too low, 10-15% less than rated voltage. 4. The knob of temperature controller is at “rest” position. 5. The temperature controller is out of order. 6. Starting relay or thermal protection unit is out of order or broken. 7. Wire broken of motor starting coil or operation coil. 8. The compressor motor is burned or rotator and stator are blocked to dead. 9. There is leakage of high-pressure gas valve or the shaft is embraced to dead.	1. Check if there is short circuit and solve it, if not, change capable fuse. 2. Check and connect tightly, or change. 3. Use till voltage rises to rated value or attach a stabilizer. 4. Rotate the knob to wanted position for suitable temperature. 5. Change the controller. 6. Change starting relay or thermal protection unit. 7. Measure using R×1 position of avometer, if there is wire broken, change compressor. 8. Change compressor. 9. Change compressor.
Compressor starts too frequent, operation time too long, but temperature drop in cabinet is too slow	1. The distance between temperatures sensing tube of temp. Controller and evaporator are too big. 2. The temperature controller is out of order. 3. Food stuffs in the cabinet too much, door opens too frequent and open time too long. 4. The environment temperature is too high, humidity too high, airflow is impeded. 5. The refrigerant is insufficient or leakage. 6. Compressor efficiency is reduced. 7. The drying filter is blocked.	1. Adjust and make it close to evaporator cover. 2. Change the temperature controller. 3. Reduce them. 4. Put the cabinet to suitable place and make air circulate well. 5. Check or supplement refrigerant. 6. Change compressor. 7. Change new drying filter.

Compressor runs without stop, temperature in cabinet is too low	1. The knob of temperature controller has been set to “over cooling” position. 2. The contacting point of temperature controller is adhered. 3. The temperature sensing probe of controller is not placed well, and causes maladjustment. 4. Compressor efficiency reduced.	1. Change the position to moderate. 2. Repair or change. 3. Adjust to suitable position, normally contact tightly with evaporator cover. 4. Change compressor.
Compressor buzzes and cannot be started, thermal protection unit jump repeatedly.	1. Voltage is too low. 2. Starting relay out of order. 3. The starting coil of starting motor is broken. 4. Compressor does not run.	1. Supplement a stabilizer, adjust to rated value. 2. Change starting relay. 3. Change compressor. 4. The shaft and piston in the compressor is blocked, please change.
After short time of operation, over load protection unit cuts off	1. The voltage is too high. 2. Over load protection unit is not good, it jumps earlier. 3. Starter contacting point is adhered. 4. There is short circuit in compressor. 5. There is mechanical problem in the compressor. 6. Temperature around compressor is too high.	1. Supplement a stabilizer and adjust its value to rated. 2. Change over load protection unit. 3. Change starting relay. 4. Change compressor. 5. Change compressor. 6. Increase heat radiation space.
Too much noise when compressor runs	1. The floor is loose. 2. The cabinet body is not stable and in level. 3. When compressor runs, friction between tubes and cabinet body causes resonance. 4. Compressor fixing screw is loose. 5. The vibration absorption cushion for compressor fixing is too tight, or too loose or ageing.	1. Reinforce the floor. 2. Make the cabinet body stable. 3. Move the tube a little away to avoid friction. 4. Make the screw tight. 5. Adjust the degree of tight or loose of vibration absorption cushion, or change cushion. 6. Change compressor.

	6. Compressor inside noise is too big or vibration absorption suspending spring is broken.	
Electricity leakage of cabinet body, you will feel tingle when touching by hand	1. Cabinet body has not been connected to the ground. 2. The compressor terminal contacts body shell and causes short circuit. 3. When the components of electrical system get wet, insulation ability is dropped, electricity leaks.	1. Make the ground connection as stipulated. 2. Change compressor. 3. Check carefully step by step, if insulation is seriously damaged, please change; remove wet parts and put them into drying box to make them dry.
Electricity leakage of temperature controller	1. The service time is too long. 2. The environment is too dirty. 3. Humidity is too high.	1. Change temperature controller. 2. Use brush to remove dust. 3. Make the temperature dry and control the environment humidity.
Temperature controller out of order	1. There is leakage of temperature sensing medium. 2. Damage of cam of contacting point spring, etc.	Change temperature controller.
The probe of temperature sensing tube doesn't contact evaporator well	It has not been mounted to position or changed during transportation.	Mount it again.

8-2-10 Cabinet cannot be started

When switching on power, the cabinet cannot be started. Determine first that the failure is caused by inside or outside factors. The factors may be:

1. Outside factors

   (1) The fuse is burned, or the contact of plug and socket is not well, or the voltage is too low.

   (2) The knob of temperature controller is set to off position.

2. Inside factors

   (1) Electrical problem of cabinet (normally caused by connection terminals coming off or not in good contact).

   (2) Temperature controller out of order (contact point are burned or switch element is damaged, etc.).

   (3) The starter relay or overload protector is bad. A bad starter normally is caused by a burn a contact points or the welded point has come off; a bad thermal protection unit is normally caused by burn contact points or a bad heating wire.

   (4) The motor winding is burned.

   (5) The compressor shaft is broken and blocking the cylinder.

8-2-11 Operation of cabinet is not normal

Cabinet starts when power is switched on, but after a few seconds or 1-2 minutes, it stops automatically and will start again in several minutes. It stops again within a very short time period after starting. If it runs like this Continuity and cannot work normally; there are several reasons for this matter:

1. Big fluctuation of voltage

The voltage required for proper operation is 110-120 Volts. If the voltage is too high, the current flowing through the starter will increase accordingly. When it exceeds the permissible value, the starting contact point will keep in connection state for a long time and cannot be released in time (at normal situation, the motor starting coil will cut off in about 1s after starting). This will make the coil temperature rising rapidly, and then the thermal protection unit cuts off the circuit and stop operation. When power is cut off, the temperature of thermal protection unit reduces quickly and will switch power on when reaching the reset temperature. At this time, if the contact point has not been released, the starting contact point could not contact tightly and it is in false connection. This will make the

compressor tremble; thermal protection unit will open after a short time.

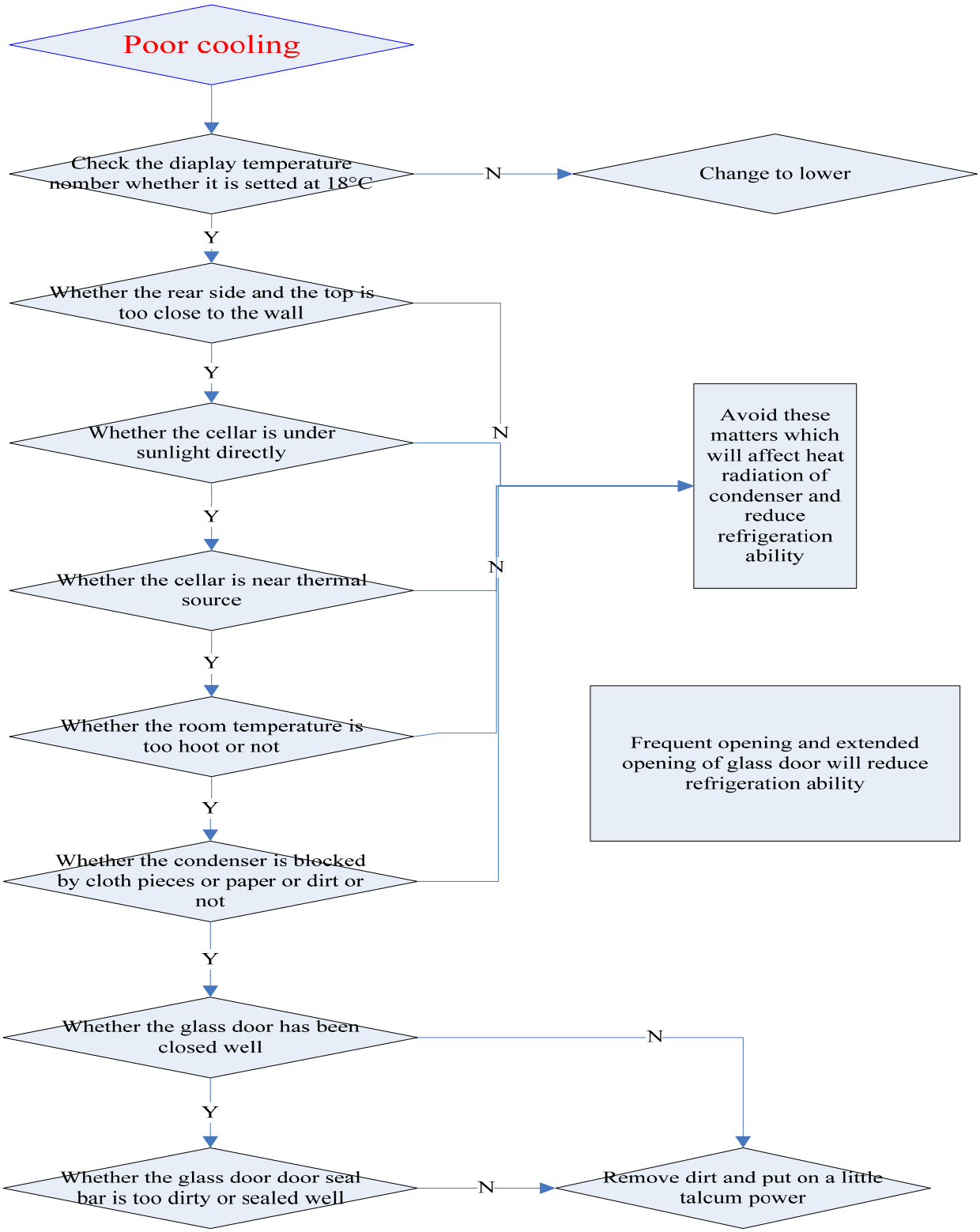
2. Operating amperage too high

Cabinet operation current is too big and will not operate normally. There are two reasons way:

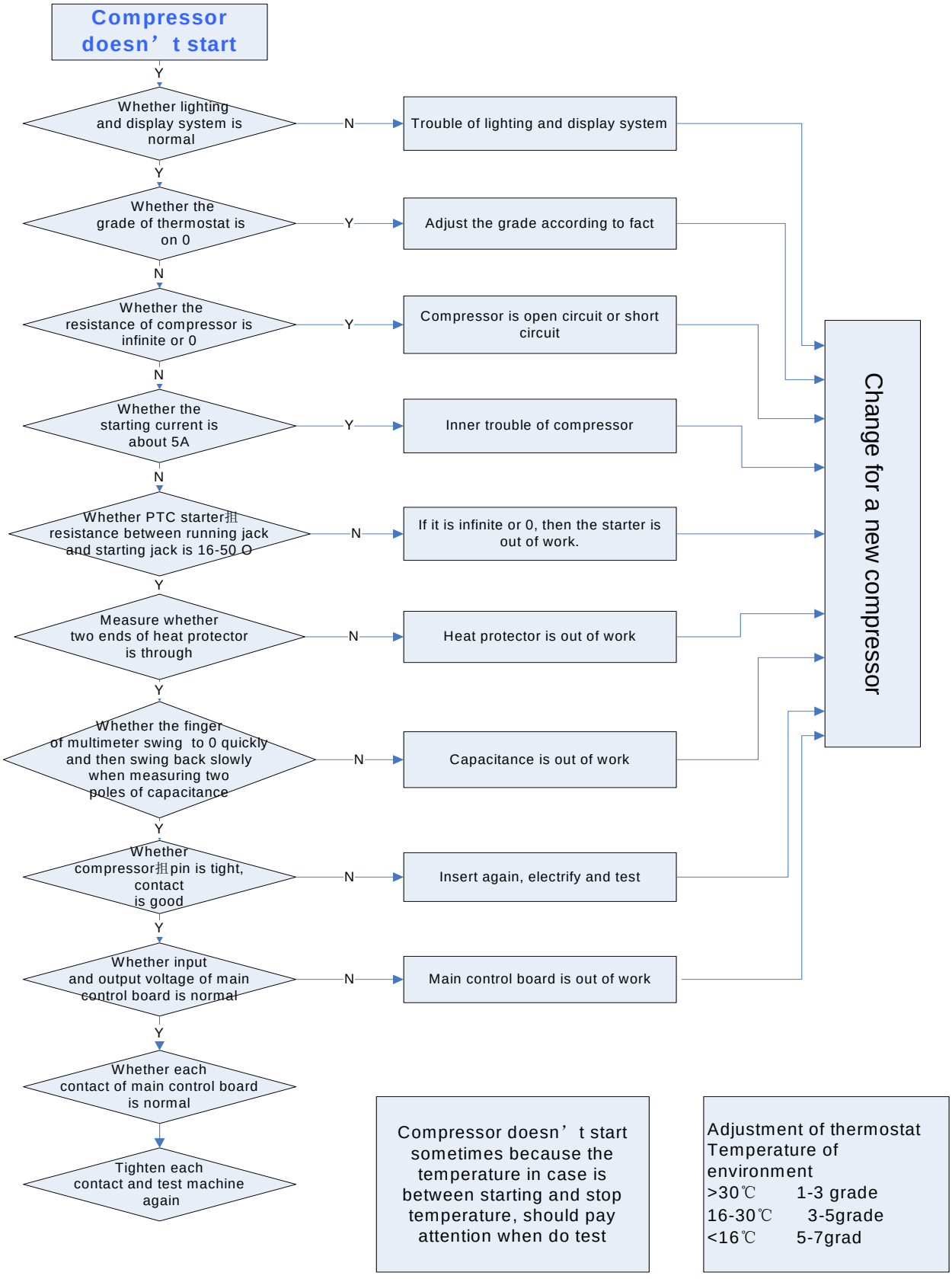
First, the cabinet stops automatically after a few seconds after starting, several minutes later it starts again and stops automatically again. With in cycles like this and the motor, or starter, and thermal protection unit will burn up after a long time. The main reason is: the motor coil is shorted at some parts.

Second, the cabinet operates a certain time after starting, but it will stop automatically before the temperature reduces before the desired temperature is reached. After several minutes, it will start again, and the electricity consumption increases bad. The reason is that the insulation around the motor windings bad.

8-2-12 Poor cooling


Poor cooling
Check the diaplay temperature nomber whether it is setted at 18°C
N
Change to lower
Y
Whether the rear side and the top is too close to the wall
Y
Whether the cellar is under sunlight directly
N
Avoid these matters which will affect heat radiation of condenser and reduce refrigeration ability
Y
Whether the cellar is near thermal source
N
Y
Whether the room temperature is too hoot or not
Frequent opening and extended opening of glass door will reduce refrigeration ability
Y
Whether the condenser is blocked by cloth pieces or paper or dirt or not
Y
Whether the glass door has been closed well
N
Y
Whether the glass door door seal bar is too dirty or sealed well
N
Remove dirt and put on a little talcum power

8-2-13. Compressor doesn't start


Compressor doesn't start
Whether lighting and display system is normal
N
Trouble of lighting and display system
Y
Whether the grade of thermostat is on 0
Y
Adjust the grade according to fact
N
Whether the resistance of compressor is infinite or 0
Y
Compressor is open circuit or short circuit
N
Whether the starting current is about 5A
Y
Inner trouble of compressor
N
Whether PTC starter担 resistance between running jack and starting jack is 16-50 O
N
If it is infinite or 0, then the starter is out of work.
Y
Measure whether two ends of heat protector is through
N
Heat protector is out of work
Y
Whether the finger of multimeter swing to 0 quickly and then swing back slowly when measuring two poles of capacitance
N
Capacitance is out of work
Y
Whether compressor担pin is tight, contact is good
N
Insert again, electrify and test
Y
Whether input and output voltage of main control board is normal
N
Main control board is out of work
Y
Whether each contact of main control board is normal
Tighten each contact and test machine again
Change for a new compressor

Compressor doesn't start sometimes because the temperature in case is between starting and stop temperature, should pay attention when do test

Adjustment of thermostat
Temperature of environment
>30℃ 1-3 grade
16-30℃ 3-5grade
<16℃ 5-7grad

SERVICE MANUAL

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Sincere forever

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